The Physics and Applications of High Brightness Electron Beams 2009
Maui, Hawaii, November 16-19, 2009

Dear Colleague,

It is with pleasure that we invite your participation in the workshop entitled "The Physics and Applications of High Brightness Electron Beams", to be held in Maui, Hawaii, November 16-19, 2009. This workshop is presently being considered, as in the past, for endorsement by the ICFA Panels on Beam Dynamics and Advanced & Novel Accelerators. It represents the latest workshop in the joint tradition of the "Arcidosso" and High Brightness Beam series, and is the direct heir to the last workshop in the series, held in Erice, Sicily.

The workshop mission is given in the following statement:

High brightness electron beams are playing an increasingly critical role in two frontier fields that are now yielding results that provoke considerable excitement and activity across the scientific community: radiation generation methods and advanced acceleration schemes. Such cutting edge radiation production methods include variations on the revolutionary 4^{th} generation device, the free-electron laser, as well as inverse Compton scattering of intense lasers. These diverse approaches are thus able to create high peak and high average power light sources, with applications in ultrafast sciences and the Å level, as well as in nuclear and high-energy physics. Likewise, high brightness beams are at the center of many future accelerator schemes, e.g. based on high gradient electron and laser wakefields. Indeed, laser wakefield accelerators are now entering the proof-of-application phase, where unique light sources based on advanced acceleration schemes are enabled. The goal of this workshop is to provide a comparative study of the generation, manipulating, modeling and measuring of high brightness electron beams, and the multitude of underlying, interdisciplinary methods linking the physics of these beam systems to the physics of advanced applications.

The preliminary web site for the workshop has been launched, and will be functional soon. Please bookmark

http://home.physics.ucla.edu/calendar/Workshops/index.html.

In the meantime, the following information is now available:

- Registration will be open soon. As the number of attendees will be limited, early registration is encouraged. The registration fee will be $450 US and will support the conference infrastructure, refreshments, attendance of young scientists and students, and publication of the conference proceedings.
- The workshop secretariat will be headed by Carly Nguyen. Communication with the workshop organization will be formally handled through the email address HBEB@physics.ucla.edu.
- The program is now being prepared, and will include invited and contributed plenary talks in the mornings, with the afternoons dedicated to working groups.
- We are at present examining proceedings options, as we will be looking to institute a review process. We are also weighing the option of publication a special issue of PRST-AB dedicated to the workshop is also planned.
- The following working groups are foreseen:

1. Sources, including photoinjectors and plasma-based sources
2. Manipulation and diagnosis of high brightness beams
3. Theory and modeling, simulation challengers
4. Applications of high brightness beams in advanced accelerators and light sources.

—The following committees are involved in organization and programming of the workshop:

Organizing committee

Co-chairs
J. Rosenzweig (UCLA)
L. Palumbo (Univ. Roma "La Sapienza")
M. Uesaka (U. Tokyo)
L. Serafini (INFN-Milano)
C. Brau (Univ. Vanderbilt)
H. Braun (PSI)
K-J. Kim (UC/ANL)
G. Dattoli (BNL)
S. Milton (Sinc. Trieste)
S. Chattopadhay (Cockroft Inst.)
P. Emma (SLAC)
J. Rossbach (DESY)
W. Leemans (LBNL)
V. Yakimenko (BNL)

Program committee

M. Ferrario (INFN-LNF), Chair
C. Pellegrini (UCLA)
W. Barletta (LBNL)
Z. Huang (SLAC)
G. Krafft (JLAB)
L. Giannessi (ENEA)
X. Wang (BNL)
R. Kishek (Univ. Maryland)
F. Stephan (DESY)
M. Eriksson (MAXLAB)
F. Gruner (LMU-Munich)
F. Stephan (DESY)
D. Giulietti (Univ. Pisa)
G. Hoffstaetter (Cornell)
T. Kamps (BESSY)
T. Shintake (SPring-8)

We hope to see as many of you as possible in Maui in November!

L. Palumbo J. Rosenzweig M. Uesaka